Subject Index

Acetate

Kinetics of Methanogens in an Expanded-Bed Reactor, Yi-Tin Wang, Makram T. Suidan and Bruce E. Rittmann, EE Feb. 86 p155-170.

Acoustic measurement

Saudi Petrochemical Plant Noise Control, Areg Gharabegian and Jim E. Peat, EE Dec. 86 p1026-1040.

Activated carbon treatment

Evaluating Field Scale GAC Systems for Drinking Water, Robert M. Clark, James M. Symons and John C. Ireland, EE Aug. 86 p744-756.

Activated sludge

Flocculant Settling Dynamics Under Constant Load, Blaine F. Severin and Richard A. Poduska, EE Feb. 86 p171-184.

Gas-Liquid Interactions in Oxygen Activated Sludge, Ricky C. Clifft and John F. Andrews, EE Feb. 86 p61-77.

Adsorption

Adsorption Characteristics of Fluoride onto Hydrous Alumina, Oliver J. Hao and C. P. Huang, EE Dec. 86 p1054-1069.

Adsorption of Hydrophobic Pollutants in Estuaries, John P. Connolly, Neal E. Armstrong and Richard W. Miksad, EE Feb. 83 p17-35.

Evaluating Field Scale GAC Systems for Drinking Water, Robert M. Clark, James M. Symons and John C. Ireland, EE Aug. 86 p744-756.

Aeration

Slack Tide Oxygen Balance Model, Joseph H. W. Lee and K. W. Choi, EE Oct. 86 p985-991.

Agitation intensity

Characterization of Agitation Intensity in Flocculation Processes, Larry A. Glasgow and Y. H. Kim, EE Dec. 86 p1158-1163.

Air pollution

Calibration of a Cyclone for Monitoring Inhalable Particles, Terry E. Baxter, Dennis D. Lane, Chatten Cowherd, Jr. and Frank Pendleton, EE June 86 p468-478.

Air stripping

Air Stripping of Volatile Organic Compounds Using Structured Media, Gary L. Amy and William J. Cooper, EE Aug. 86 p729-743.

Air water interactions

Wind Function for a Sheltered Stream, John S. Gulliver and Heinz G. Stefan, EE Apr. 86 p387-399.

Algorithms

Looped Water Distribution System Optimization for a Single Loading, Anand V. Chiplunkar, S. L. Mehndiratta and P. Khanna, EE Apr. 86 p264-279.

Alumina

Adsorption Characteristics of Fluoride onto Hydrous Alumina, Oliver J. Hao and C. P. Huang, EE Dec. 86 p1054-1069.

Ammonia

Model of Ammonia and Carbon Oxidation in Biofilms, Stuart E. Strand, EE Aug. 86 p785-804.

Anaerobic digestion

Fundamentals of Anaerobic Digestion of Wastewater Sludge, Gene F. Parkin and William F. Owen, EE Oct. 86 p867-920.

Anaerobic processes

Kinetics of Methanogens in an Expanded-Bed Reactor, Yi-Tin Wang, Makram T. Suidan and Bruce E. Rittmann, EE Feb. 86 p155-170.

Aquatic plants

Macrophyte Growth in Shallow Streams: Field Investigations, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p953-966.

Macrophyte Growth in Shallow Streams: Biomass Model, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p967-982.

Wastewater Treatment and Renovation by Different Duckweed Species, Gideon Oron, Dan Porath and Louw R. Wildschut, EE Apr. 86 p247-263.

Biochemical oxygen demand

DO Sag Model for Extremely Fast River Purification, Devendra Swaroop Bhargava, EE June 86 p572-585.

Biofilm

Kinetics of Methanogens in an Expanded-Bed Reactor, Yi-Tin Wang, Makram T. Suidan and Bruce E. Rittmann, EE Feb. 86 p155-170.

Model of Ammonia and Carbon Oxidation in Biofilms, Stuart E. Strand, EE Aug. 86 p785-804.

Performance of Deep Biofilm Reactors, Makram T. Suidan, EE Feb. 86 p78-93.

Biological operations

Distribution of Retention Times in Biological Filters I: Mathematical Model, Yilmaz Muslu, EE Dec. 86 p1122-1137.

Distribution of Retention Times in Biological Filters. II: Experimental Confirmation and Practical Application, Yilmaz Muslu, EE Dec. 86 p1138-1150.

Biomass

Macrophyte Growth in Shallow Streams: Biomass Model, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p967-982.

Bridges, railroad

Evaluation of the Noise Level of Steel Railway Bridges, Zbigniew Manko, EE June 86 p439-453.

Bridges, steel

Evaluation of the Noise Level of Steel Railway Bridges, Zbigniew Manko, EE June 86 p439-453.

Bulking

Effect of Influent Property on Filter Performance, Jerry Y. C. Huang and Fernando Garcia-Maura, EE Aug. 86 p701-717.

Cadmium

Effects of Cd(II) and Cu(II) on a Biofilm System, Shoou-Yuh Chang, Ju-Chang Huang and Yow-Chyun Liu, EE Feb. 86 p94-104.

Calibration

Phytoplankton in Saginaw Bay: I. Calibration Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p400-414.

Capacity

Evaluating Field Scale GAC Systems for Drinking Water, Robert M. Clark, James M. Symons and John C. Ireland, EE Aug. 86 p744-756.

Channel flow

Hydrosalinity Modeling of Suspended Sediments, Hooshang Nezafati, David S. Bowles and L. Douglas James, EE Aug. 86 p663-676.

Channelization

Water Quality Effects of Excavation and Diversion, F. Douglas Shields, Jr. and Thomas G. Sanders, EE Apr. 86 p2111-228.

Characteristics

Flow Characteristics of Landfill Leachate Collection Systems and Liners, George P. Korfiatis and Alexander C. Demetracopoulos, EE June 86 p538-550.

Chemical reactions

Clay Liner Compatibility in Waste Disposal Practice, Richard J. Finno and William R. Schubert, EE Dec. 86 p1070-1084.

Clarifiers

Flocculant Settling Dynamics Under Constant Load, Blaine F. Severin and Richard A. Poduska, EE Feb. 86 p171-184.

Hydraulics of Rectangular Clarifiers, David W. Ostendorf, EE Oct. 86 p939-952.

Model for Winter Heat Loss in Uncovered Clarifiers, Danny J. Wall and Glen Petersen, EE Feb. 86 p123-138.

Clay liners

Clay Liner Compatibility in Waste Disposal Practice, Richard J. Finno and William R. Schubert, EE Dec. 86 p1070-1084.

Clay Liner Construction and Quality Control, J. Jeffrey Peirce, Goran Sallfors and Eric Peterson, EE Feb. 86 p13-24.

Overburden Pressures Exerted on Clay Liners, J. Jeffrey Peirce, Goran Sallfors and Louis Murray, EE Apr. 86 p280-291.

Coagulation

Chemical/Bio-Fluidized Bed Treatment & Slaughterhouse Wastwater, Chun T. Li, Wen K. Shieh, Chun S. Wu and Ju S. Huang, EE Aug. 86 p718-728.

Precursor Size and Organic Halide Formation Rates in Raw and Coagulated Surface Waters, Robert L. Sinsabaugh, III, Robert C. Hoehn, William R. Knocke and Arthur E. Linkins, EE Feb. 86 p139-153.

Coliforms

Tertiary Treatment with Ferrate and Ozone, Shaukat Farooq and Abdul Bari, EE Apr. 86 p301-310.

Colorado River

Hydrosalinity Modeling of Suspended Sediments, Hooshang Nezafati, David S. Bowles and L. Douglas James, EE Aug. 86 p663-676.

Salt Release Model for Suspended Sediments, Hooshang Nezafati, David S. Bowles and J. Paul Riley, EE Aug. 86 p647-662.

Communication skills

The Public Role in Environmental Assessments, Task Committee on Environmental Assessment of the Air, Noise and Radiation Management Committee of the Environmental Engineering Division, EE Aug. 86 p623-637.

Community relations

The Public Role in Environmental Assessments, Task Committee on Environmental Assessment of the Air, Noise and Radiation Management Committee of the Environmental Engineering Division, EE Aug. 86 p623-637.

Composts

Market Potential for Sludge Compost Product, Jerry Y. C. Huang, EE June 86 p454-467.

Computerized design

Designing Sanitary Sewers with Microcomputers, Drew P. Desher and Patrick K. Davis, EE Dec. 86 p993-1007.

Computerized scheduling

Computer Procedure for Sizing Equalization Storage, S. L. Ong and G. S. Lee, EE June 86 p607-612.

Construction

Water Quality Effects of Excavation and Diversion, F. Douglas Shields, Jr. and Thomas G. Sanders, EE Apr. 86 p2111-228.

Control systems

Gas-Liquid Interactions in Oxygen Activated Sludge, Ricky C. Clifft and John F. Andrews, EE Feb. 86 p61-77.

Copper

Effects of Cd(II) and Cu(II) on a Biofilm System, Shoou-Yuh Chang, Ju-Chang Huang and Yow-Chyun Liu, EE Feb. 86 p94-104.

Cost minimization

Designing Sanitary Sewers with Microcomputers, Drew P. Desher and Patrick K. Davis, EE Dec. 86 p993-1007.

Crosswind

The Effects of Cross-Wind Shear on Horizontal Dispersion, Ashok Kumar, EE Feb. 86 p1-11.

Cyclone separators

Calibration of a Cyclone for Monitoring Inhalable Particles, Terry E. Baxter, Dennis D. Lane, Chatten Cowherd, Jr. and Frank Pendleton, EE June 86 p468-478.

Data analysis

Meteorological Data Analysis for Drainage System Design, Barry J. Adams, Hugh G. Fraser, Charles D. D. Howard and M. Sami Hanafy, EE Oct. 86 p827-848.

Denitrification

Stream Model of Benthic Nitrification-Denitrification, Randall E. Williams and Mark S. Lewis, EE Apr. 86 p367-386.

Deoxygenation

Slack Tide Oxygen Balance Model, Joseph H. W. Lee and K. W. Choi, EE Oct. 86 p985-991.

Design storms

Meteorological Data Analysis for Drainage System Design, Barry J. Adams, Hugh G. Fraser, Charles D. D. Howard and M. Sami Hanafy, EE Oct. 86 p827-848.

Dioxin

Geostatistical Analysis of Hazardous Waste Site Data, John H. Zirschky and Daniel J. Harris, EE Aug. 86 p770-784.

Discharge coefficients

Rectangular Lateral Orifices in Open Channels, Amruthur S. Ramamurthy, Udoyara S. Tim and Semaan Sarraf, EE Apr. 86 p292-300.

Dispersion

Dispersion Response of Two-Layer Flows, George C. Christodoulou, EE Apr. 86 p433-438.

The Effects of Cross-Wind Shear on Horizontal Dispersion, Ashok Kumar, EE Feb. 86 p1-11.

Dissipation

Characterization of Agitation Intensity in Flocculation Processes, Larry A. Glasgow and Y. H. Kim, EE Dec. 86 p1158-1163.

Dissolved oxygen

DO Sag Model for Extremely Fast River Purification, Devendra Swaroop Bhargava, EE June 86 p572-585.

River Quality Management under Stochastic Streamflow, O. Fujiwara, Selvanayagam K. Gnanendran and Shinichiro Ohgaki, EE Apr. 86 p185-198.

Stream Model of Benthic Nitrification-Denitrification, Randall E. Williams and Mark S. Lewis, EE Apr. 86 p367-386.

Drainage

Flow Characteristics of Landfill Leachate Collection Systems and Liners, George P. Korfiatis and Alexander C. Demetracopoulos, EE June 86 p538-550.

Drainage systems

Meteorological Data Analysis for Drainage System Design, Barry J. Adams, Hugh G. Fraser, Charles D. D. Howard and M. Sami Hanafy, EE Oct. 86 p827-848.

Dynamic models

Gas-Liquid Interactions in Oxygen Activated Sludge, Ricky C. Clifft and John F. Andrews, EE Feb. 86 p61-77.

Effluents

Tertiary Treatment with Ferrate and Ozone, Shaukat Farooq and Abdul Bari, EE Apr. 86 p301-310.

Entrainment

Entrainment-Based Flux of Phosphorus in Onondaga Lake, Steven Effler, Martin C. Wodka, Charles T. Driscoll, Carol Brooks, Mary Gail Perkins and Emmet M. Owens, EE June 86 p617-622.

Environmental audits

Environmental Auditing—Overview, Task Committee on Environmental Auditing of the Professional Coordination Committee of the Environmental Engineering Division, EE Aug. 86 p638-646.

Environmental compatibility

Environmentally Balanced Sugar Refinery Complex, Nelson L. Nemerow and Avijit Dasgupta, EE Apr. 86 p229-235.

Environmental engineering

Environmental Engineering—Historical, Current and Future Perspectives, Earnest F. Gloyna, EE Oct. 86 p812-826.

Environmental issues

Environmental Engineering—Historical, Current and Future Perspectives, Earnest F. Gloyna, EE Oct. 86 p812-826.

The Public Role in Environmental Assessments, Task Committee on Environmental Assessment of the Air, Noise and Radiation Management Committee of the Environmental Engineering Division, EE Aug. 86 p623-637.

Environmental quality regulations

Environmental Auditing—Overview, Task Committee on Environmental Auditing of the Professional Coordination Committee of the Environmental Engineering Division, EE Aug. 86 p638-646.

Estuaries

Adsorption of Hydrophobic Pollutants in Estuaries, John P. Connolly, Neal E. Armstrong and Richard W. Miksad, EE Feb. 83 p17-35.

Assessing Phosphorus Control in the James River Basin, Wu-Seng Lung, EE Feb. 86 p44-60.

Modeling of Pollutant Dispersion in Stratified

Oscillatory Flows, Jae K. Park and A. James, EE Oct. 86 p921-938.

Slack Tide Oxygen Balance Model, Joseph H. W. Lee and K. W. Choi, EE Oct. 86 p985-991.

Eutrophication

Assessing Phosphorus Control in the James River Basin, Wu-Seng Lung, EE Feb. 86 p44-60.

Modeling of Phytoplankton in Saginaw Bay: II. Post-Audit Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p415-429.

Phytoplankton in Saginaw Bay: I. Calibration Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p400-414.

Ferrate

Tertiary Treatment with Ferrate and Ozone, Shaukat Farooq and Abdul Bari, EE Apr. 86 p301-310.

Field investigations

The Effects of Cross-Wind Shear on Horizontal Dispersion, Ashok Kumar, EE Feb. 86 p1-11.

Macrophyte Growth in Shallow Streams: Field Investigations, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p953-966.

Filters

Effect of Influent Property on Filter Performance, Jerry Y. C. Huang and Fernando Garcia-Maura, EE Aug. 86 p701-717.

Filtration

Destabilization of Particles by Turbulent Rapid Mixing, Appian Amirtharajah and Scott L. Trusler, EE Dec. 86 p1085-1108.

Tertiary Filtration of Wastewaters, ASCE Task Committee on Design of Wastewater Filtration Facilities, EE Dec. 86 p1008-1025.

Fixed-film process

Effects of Cd(II) and Cu(II) on a Biofilm System, Shoou-Yuh Chang, Ju-Chang Huang and Yow-Chyun Liu, EE Feb. 86 p94-104.

Performance of Deep Biofilm Reactors, Makram T. Suidan, EE Feb. 86 p78-93.

Flocculants

Flocculant Settling Dynamics Under Constant Load, Blaine F. Severin and Richard A. Poduska, EE Feb. 86 p171-184.

Flocculation

Characterization of Agitation Intensity in Flocculation Processes, Larry A. Glasgow and Y. H. Kim, EE Dec. 86 p1158-1163.

Chemical/Bio-Fluidized Bed Treatment & Slaughterhouse Wastwater, Chun T. Li, Wen K. Shieh, Chun S. Wu and Ju S. Huang, EE Aug. 86 p718-728.

Flow characteristics

Modeling of Pollutant Dispersion in Stratified Oscillatory Flows, Jae K. Park and A. James, EE Oct. 86 p921-938.

Flow distribution

Rectangular Lateral Orifices in Open Channels, Amruthur S. Ramamurthy, Udoyara S. Tim and Semaan Sarraf, EE Apr. 86 p292-300.

Flow patterns

Distribution of Retention Times in Biological Filters I: Mathematical Model, Yilmaz Muslu, EE Dec. 86 p1122-1137.

Distribution of Retention Times in Biological Filters. II: Experimental Confirmation and Practical Application, Yilmaz Muslu, EE Dec. 86 p1138-1150.

Fluidized bed processing

Chemical/Bio-Fluidized Bed Treatment & Slaughterhouse Wastwater, Chun T. Li, Wen K. Shieh, Chun S. Wu and Ju S. Huang, EE Aug. 86 p718-728.

Flumes

Flume Tests on Hydrocarbon Raeration Tracer Gases, Jerad D. Bales and Edward R. Holley, EE Aug. 86 p695-700.

Fluorides

Adsorption Characteristics of Fluoride onto Hydrous Alumina, Oliver J. Hao and C. P. Huang, EE Dec. 86 p1054-1069.

Frequency analysis

Meteorological Data Analysis for Drainage System Design, Barry J. Adams, Hugh G. Fraser, Charles D. D. Howard and M. Sami Hanafy, EE Oct. 86 p827-848.

Gasoline

Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Granular media

Evaluating Field Scale GAC Systems for Drinking Water, Robert M. Clark, James M. Symons and John C. Ireland, EE Aug. 86 p744-756.

Groundwater

Probabilistic Analysis of Sludge Land Application, Susan S. Kaufman and Douglas A. Haith, EE Dec. 86 p1041-1053.

Groundwater pollution

Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Groundwater Contamination Site Ranking Methodology, Adam W. Olivieri, Don M. Eisenberg and Robert C. Cooper, EE Aug. 86 p757-769.

Halides

Precursor Size and Organic Halide Formation Rates in Raw and Coagulated Surface Waters, Robert L. Sinsabaugh, III, Robert C. Hoehn, William R. Knocke and Arthur E. Linkins, EE Feb. 86 p139-153.

Hazardous waste

Mobility of Organics in Land Treatment Systems,

Ramzi J. Mahmood and Ronald C. Sims, EE Apr. 86 p236-245.

Risk Penalty Functions for Hazardous Waste Management, Aaron A. Jennings and P. Suresh, EE Feb. 86 p105-122.

Hazardous waste sites

Clay Liner Construction and Quality Control, J. Jeffrey Peirce, Goran Sallfors and Eric Peterson, EE Feb. 86 p13-24.

Geostatistical Analysis of Hazardous Waste Site Data, John H. Zirschky and Daniel J. Harris, EE Aug. 86 p770-784.

Groundwater Contamination Site Ranking Methodology, Adam W. Olivieri, Don M. Eisenberg and Robert C. Cooper, EE Aug. 86 p757-769.

Hazardous wastes

Leachate Collection Systems, Masood Ghassemi, EE June 86 p613-617.

Head loss

Effect of Influent Property on Filter Performance, Jerry Y. C. Huang and Fernando Garcia-Maura, EE Aug. 86 p701-717.

Heat loss

Model for Winter Heat Loss in Uncovered Clarifiers, Danny J. Wall and Glen Petersen, EE Feb. 86 p123-138.

Heat transfer

Model for Winter Heat Loss in Uncovered Clarifiers, Danny J. Wall and Glen Petersen, EE Feb. 86 p123-138.

Wind Function for a Sheltered Stream, John S. Gulliver and Heinz G. Stefan, EE Apr. 86 p387-399.

Heavy metals

Effects of Cd(II) and Cu(II) on a Biofilm System, Shoou-Yuh Chang, Ju-Chang Huang and Yow-Chyun Liu, EE Feb. 86 p94-104.

History

Environmental Engineering—Historical, Current and Future Perspectives, Earnest F. Gloyna, EE Oct. 86 p812-826.

Hydraulic conductivity

Clay Liner Construction and Quality Control, J. Jeffrey Peirce, Goran Sallfors and Eric Peterson, EE Feb. 86 p13-24.

Hydraulics

Distribution of Retention Times in Biological Filters I: Mathematical Model, Yilmaz Muslu, EE Dec. 86 p1122-1137.

Distribution of Retention Times in Biological Filters. II: Experimental Confirmation and Practical Application, Yilmaz Muslu, EE Dec. 86 p1138-1150.

Hydrocarbon gases

Flume Tests on Hydrocarbon Raeration Tracer Gases, Jerad D. Bales and Edward R. Holley, EE Aug. 86 p695-700.

Hydrodynamics

Dispersion Response of Two-Layer Flows, George C. Christodoulou, EE Apr. 86 p433-438.

Hydrogen sulfide

Olfactory Quantification of Sewage Odors, Lawrence C. C. Koe and Derek K. Brady, EE Apr. 86 p328-345.

Incineration

Mass Burning of MSW With Energy Recovery, Arthur H. Beckman and Mark G. Dragovich, EE June 86 p564-571.

Industrial plants

Environmentally Balanced Sugar Refinery Complex, Nelson L. Nemerow and Avijit Dasgupta, EE Apr. 86 p229-235.

Saudi Petrochemical Plant Noise Control, Areg Gharabegian and Jim E. Peat, EE Dec. 86 p1026-1040.

Influents

Effect of Influent Property on Filter Performance, Jerry Y. C. Huang and Fernando Garcia-Maura, EE Aug. 86 p701-717.

Iron

Some Considerations on Iron Removal, Windsor Sung and Eugene J. Forbes, EE Dec. 84 p1048-1061.

Lakes

Model for Sediment Oxygen Demand in Lakes, R. Walker Walker and William J. Snodgrass, EE Feb. 86 p25-43.

Modeling of Phytoplankton in Saginaw Bay: II. Post-Audit Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p415-429.

Phytoplankton in Saginaw Bay: I. Calibration Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p400-414.

Land application

Probabilistic Analysis of Sludge Land Application, Susan S. Kaufman and Douglas A. Haith, EE Dec. 86 p1041-1053.

Land treatment

Mobility of Organics in Land Treatment Systems, Ramzi J. Mahmood and Ronald C. Sims, EE Apr. 86 p236-245.

Landfills

Clay Liner Compatibility in Waste Disposal Practice, Richard J. Finno and William R. Schubert, EE Dec. 86 p1070-1084.

Flow Characteristics of Landfill Leachate Collection Systems and Liners, George P. Korfiatis and Alexander C. Demetracopoulos, EE June 86 p538-550.

Leachate Collection Systems, Masood Ghassemi, EE June 86 p613-617.

Lase reports

Environmental Auditing—Overview, Task Committee on Environmental Auditing of the Profes-

sional Coordination Committee of the Environmental Engineering Division, EE Aug. 86 p638-646.

Leachate collection systems

Flow Characteristics of Landfill Leachate Collection Systems and Liners, George P. Korfiatis and Alexander C. Demetracopoulos, EE June 86 p538-550.

Leachate Collection Systems, Masood Ghassemi, EE June 86 p613-617.

Leachate production

Modeling Leachate Production from Municipal Landfills, Alexander C. Demetracopoulos, Lilly Sehayek and Haydar Erdogan, EE Oct. 86 p849-866.

Leakage

Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Legal factors

Environmental Auditing—Overview, Task Committee on Environmental Auditing of the Professional Coordination Committee of the Environmental Engineering Division, EE Aug. 86 p638-646.

Liners

Flow Characteristics of Landfill Leachate Collection Systems and Liners, George P. Korfiatis and Alexander C. Demetracopoulos, EE June 86 p538-550.

Market research

Market Potential for Sludge Compost Product, Jerry Y. C. Huang, EE June 86 p454-467.

Mass transfer

Wind Function for a Sheltered Stream, John S. Gulliver and Heinz G. Stefan, EE Apr. 86 p387-399.

Mathematical models

Adsorption of Hydrophobic Pollutants in Estuaries, John P. Connolly, Neal E. Armstrong and Richard W. Miksad, EE Feb. 83 p17-35.

Distribution of Retention Times in Biological Filters I: Mathematical Model, Yilmaz Muslu, EE Dec. 86 p1122-1137.

Kinetics of Methanogens in an Expanded-Bed Reactor, Yi-Tin Wang, Makram T. Suidan and Bruce E. Rittmann, EE Feb. 86 p155-170.

Salt Release Model for Suspended Sediments, Hooshang Nezafati, David S. Bowles and J. Paul Riley, EE Aug. 86 p647-662.

Measurement

Olfactory Quantification of Sewage Odors, Lawrence C. C. Koe and Derek K. Brady, EE Apr. 86 p328-345.

Meteorological data

Meteorological Data Analysis for Drainage System Design, Barry J. Adams, Hugh G. Fraser, Charles D. D. Howard and M. Sami Hanafy, EE Oct. 86 p827-848.

Methane

Kinetics of Methanogens in an Expanded-Bed Reactor, Yi-Tin Wang, Makram T. Suidan and Bruce E. Rittmann, EE Feb. 86 p155-170.

Microcomputers

Computer Procedure for Sizing Equalization Storage, S. L. Ong and G. S. Lee, EE June 86 p607-612.

Designing Sanitary Sewers with Microcomputers, Drew P. Desher and Patrick K. Davis, EE Dec. 86 p993-1007.

Mixing

Destabilization of Particles by Turbulent Rapid Mixing, Appian Amirtharajah and Scott L. Trusler, EE Dec. 86 p1085-1108.

Model accuracy

Effects of Parameter Uncertainty in Stream Modeling, John J. Warwick and William G. Cale, EE June 86 p479-489.

Model verification

Modeling of Phytoplankton in Saginaw Bay: II. Post-Audit Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p415-429.

Monitoring

Calibration of a Cyclone for Monitoring Inhalable Particles, Terry E. Baxter, Dennis D. Lane, Chatten Cowherd, Jr. and Frank Pendleton, EE June 86 p468-478.

Exponential Smoothing of Monitoring Data, Paula A. Hitchman and P. M. Berthouex, EE June 86 p551-563.

Monte Carlo method

Effects of Parameter Uncertainty in Stream Modeling, John J. Warwick and William G. Cale, EE June 86 p479-489.

Probabilistic Analysis of Sludge Land Application, Susan S. Kaufman and Douglas A. Haith, EE Dec. 86 p1041-1053.

Municipal wastes

Fundamentals of Anaerobic Digestion of Wastewater Sludge, Gene F. Parkin and William F. Owen, EE Oct. 86 p867-920.

Mass Burning of MSW With Energy Recovery, Arthur H. Beckman and Mark G. Dragovich, EE June 86 p564-571.

Nitrates

Probabilistic Analysis of Sludge Land Application, Susan S. Kaufman and Douglas A. Haith, EE Dec. 86 p1041-1053.

Nitrification

Stream Model of Benthic Nitrification-Denitrification, Randall E. Williams and Mark S. Lewis, EE Apr. 86 p367-386.

Nitrogen

Probabilistic Analysis of Sludge Land Application,

Susan S. Kaufman and Douglas A. Haith, EE Dec. 86 p1041-1053.

Noise control

Saudi Petrochemical Plant Noise Control, Areg Gharabegian and Jim E. Peat, EE Dec. 86 p1026-1040.

Noise measurement

Evaluation of the Noise Level of Steel Railway Bridges, Zbigniew Manko, EE June 86 p439-453.

Noise reduction

Evaluation of the Noise Level of Steel Railway Bridges, Zbigniew Manko, EE June 86 p439-453.

Nomographs

Performance of Deep Biofilm Reactors, Makram T. Suidan, EE Feb. 86 p78-93.

Nonlinear programming

Looped Water Distribution System Optimization for a Single Loading, Anand V. Chiplunkar, S. L. Mehndiratta and P. Khanna, EE Apr. 86 p264-279.

Numerical models

The Effects of Cross-Wind Shear on Horizontal Dispersion, Ashok Kumar, EE Feb. 86 p1-11.

Nutrients

Macrophyte Growth in Shallow Streams: Field Investigations, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p953-966.

Macrophyte Growth in Shallow Streams: Biomass Model, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p967-982.

Odors

Olfactory Quantification of Sewage Odors, Lawrence C. C. Koe and Derek K. Brady, EE Apr. 86 p328-345.

Open channels

Rectangular Lateral Orifices in Open Channels, Amruthur S. Ramamurthy, Udoyara S. Tim and Semaan Sarraf, EE Apr. 86 p292-300.

Organic carbon

Model of Ammonia and Carbon Oxidation in Biofilms, Stuart E. Strand, EE Aug. 86 p785-804.

Precursor Size and Organic Halide Formation Rates in Raw and Coagulated Surface Waters, Robert L. Sinsabaugh, III, Robert C. Hoehn, William R. Knocke and Arthur E. Linkins, EE Feb. 86 p139-153.

Organic compounds

Mobility of Organics in Land Treatment Systems, Ramzi J. Mahmood and Ronald C. Sims, EE Apr. 86 p236-245.

Organic loading

Wastewater Treatment and Renovation by Different Duckweed Species, Gideon Oron, Dan Porath and Louw R. Wildschut, EE Apr. 86 p247-263.

Overburden

Overburden Pressures Exerted on Clay Liners, J. Jeffrey Peirce, Goran Sallfors and Louis Murray, EE Apr. 86 p280-291.

Overland flow

Hydrosalinity Modeling of Suspended Sediments, Hooshang Nezafati, David S. Bowles and L. Douglas James, EE Aug. 86 p663-676.

Oxidation

Model of Ammonia and Carbon Oxidation in Biofilms, Stuart E. Strand, EE Aug. 86 p785-804.

Oxygen content

Slack Tide Oxygen Balance Model, Joseph H. W. Lee and K. W. Choi, EE Oct. 86 p985-991.

Oxygen demand

Model for Sediment Oxygen Demand in Lakes, R. Walker Walker and William J. Snodgrass, EE Feb. 86 p25-43.

Oxygenation

Some Considerations on Iron Removal, Windsor Sung and Eugene J. Forbes, EE Dec. 84 p1048-1061.

Ozone

Tertiary Treatment with Ferrate and Ozone, Shaukat Farooq and Abdul Bari, EE Apr. 86 p301-310.

Parameters

Effects of Parameter Uncertainty in Stream Modeling, John J. Warwick and William G. Cale, EE June 86 p479-489.

Particle distribution

Calibration of a Cyclone for Monitoring Inhalable Particles, Terry E. Baxter, Dennis D. Lane, Chatten Cowherd, Jr. and Frank Pendleton, EE June 86 p468-478.

Particle size distribution

Destabilization of Particles by Turbulent Rapid Mixing, Appian Amirtharajah and Scott L. Trusler, EE Dec. 86 p1085-1108.

Effect of Influent Property on Filter Performance, Jerry Y. C. Huang and Fernando Garcia-Maura, EE Aug. 86 p701-717.

Evaluation of Π Breakage Theory for Refuse Components, P. Aarne Vesilind, Eric I. Pas and Barbara Simpson, EE Dec. 86 p1109-1121.

Some Considerations on Iron Removal, Windsor Sung and Eugene J. Forbes, EE Dec. 84 p1048-1061.

Performance evaluation

Effect of Influent Property on Filter Performance, Jerry Y. C. Huang and Fernando Garcia-Maura, EE Aug. 86 p701-717.

Permeability

Clay Liner Compatibility in Waste Disposal Practice, Richard J. Finno and William R. Schubert, EE Dec. 86 p1070-1084.

Petrochemicals

Saudi Petrochemical Plant Noise Control, Areg Gharabegian and Jim E. Peat, EE Dec. 86 p1026-1040.

Phosphorus

Alternative Methods for Estimation of Phosphorus Loadings, James D. Miertschin, EE Dec. 86 p1153-1158.

Assessing Phosphorus Control in the James River Basin, Wu-Seng Lung, EE Feb. 86 p44-60.

Entrainment-Based Flux of Phosphorus in Onondaga Lake, Steven Effler, Martin C. Wodka, Charles T. Driscoll, Carol Brooks, Mary Gail Perkins and Emmet M. Owens, EE June 86 p617-622.

Modeling of Phytoplankton in Saginaw Bay: II. Post-Audit Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p415-429.

Phytoplankton in Saginaw Bay: I. Calibration Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p400-414.

Phytoplankton

Modeling of Phytoplankton in Saginaw Bay: II. Post-Audit Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p415-429.

Phytoplankton in Saginaw Bay: I. Calibration Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p400-414.

Pollutants

Effects of Parameter Uncertainty in Stream Modeling, John J. Warwick and William G. Cale, EE June 86 p479-489.

Pollution

Probabilistic Analysis of Sludge Land Application, Susan S. Kaufman and Douglas A. Haith, EE Dec. 86 p1041-1053.

Potable water

Expression for Drinking Water Supply Standards, Devendra Swaroop Bhargava, EE June 85 p304-316.

Professional practice

Environmental Engineering—Historical, Current and Future Perspectives, Earnest F. Gloyna, EE Oct. 86 p812-826.

Public participation

The Public Role in Environmental Assessments, Task Committee on Environmental Assessment of the Air, Noise and Radiation Management Committee of the Environmental Engineering Division, EE Aug. 86 p623-637.

Pumping

Computer Procedure for Sizing Equalization Storage, S. L. Ong and G. S. Lee, EE June 86 p607-612.

Quality control

Clay Liner Construction and Quality Control, J. Jeffrey Peirce, Goran Sallfors and Eric Peterson, EE Feb. 86 p13-24.

Radioactive waste disposal

Management of Inactive Uranium Mill Tailings, Task Committee on Low-Level Radioactive Waste Management of the Technical Committee on Nuclear Effects, EE June 86 p490-537.

Raeration measurement

Flume Tests on Hydrocarbon Raeration Tracer Gases, Jerad D. Bales and Edward R. Holley, EE Aug. 86 p695-700.

Refineries

Environmentally Balanced Sugar Refinery Complex, Nelson L. Nemerow and Avijit Dasgupta, EE Apr. 86 p229-235.

Saudi Petrochemical Plant Noise Control, Areg Gharabegian and Jim E. Peat, EE Dec. 86 p1026-1040.

Research needs

Leachate Collection Systems, Masood Ghassemi, EE June 86 p613-617.

Reservoirs

Alternative Methods for Estimation of Phosphorus Loadings, James D. Miertschin, EE Dec. 86 p1153-1158.

Precursor Size and Organic Halide Formation Rates in Raw and Coagulated Surface Waters, Robert L. Sinsabaugh, III, Robert C. Hoehn, William R. Knocke and Arthur E. Linkins, EE Feb. 86 p139-153.

Retention time

Distribution of Retention Times in Biological Filters I: Mathematical Model, Yilmaz Muslu, EE Dec. 86 p1122-1137.

Distribution of Retention Times in Biological Filters. II: Experimental Confirmation and Practical Application, Yilmaz Muslu, EE Dec. 86 p1138-1150.

Risk analysis

Environmental Auditing—Overview, Task Committee on Environmental Auditing of the Professional Coordination Committee of the Environmental Engineering Division, EE Aug. 86 p638-646.

Groundwater Contamination Site Ranking Methodology, Adam W. Olivieri, Don M. Eisenberg and Robert C. Cooper, EE Aug. 86 p757-769.

Risk Penalty Functions for Hazardous Waste Management, Aaron A. Jennings and P. Suresh, EE Feb. 86 p105-122.

River basins

Assessing Phosphorus Control in the James River Basin, Wu-Seng Lung, EE Feb. 86 p44-60.

Hydrosalinity Modeling of Suspended Sediments, Hooshang Nezafati, David S. Bowles and L. Douglas James, EE Aug. 86 p663-676.

Salt Release Model for Suspended Sediments, Hooshang Nezafati, David S. Bowles and J. Paul Riley, EE Aug. 86 p647-662.

Rivers

Alternative Methods for Estimation of Phosphorus Loadings, James D. Miertschin, EE Dec. 86 p1153-1158.

DO Sag Model for Extremely Fast River Purification, Devendra Swaroop Bhargava, EE June 86 p572-585.

River Quality Management under Stochastic Streamflow, O. Fujiwara, Selvanayagam K. Gnanendran and Shinichiro Ohgaki, EE Apr. 86 p185-198.

Rotating biological contactor

Effects of Cd(II) and Cu(II) on a Biofilm System, Shoou-Yuh Chang, Ju-Chang Huang and Yow-Chyun Liu, EE Feb. 86 p94-104.

Salinity

Hydrosalinity Modeling of Suspended Sediments, Hooshang Nezafati, David S. Bowles and L. Douglas James, EE Aug. 86 p663-676.

Modeling of Pollutant Dispersion in Stratified Oscillatory Flows, Jae K. Park and A. James, EE Oct. 86 p921-938.

Salt Release Model for Suspended Sediments, Hooshang Nezafati, David S. Bowles and J. Paul Riley, EE Aug. 86 p647-662.

Sand

Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Sanitary landfills

Modeling Leachate Production from Municipal Landfills, Alexander C. Demetracopoulos, Lilly Sehayek and Haydar Erdogan, EE Oct. 86 p849-866.

Sanitary sewers

Designing Sanitary Sewers with Microcomputers, Drew P. Desher and Patrick K. Davis, EE Dec. 86 p993-1007.

Prediction of Sulfide Build-up in Filled Sanitary Sewers, G. A. Holder, EE Apr. 86 p199-210.

Saudi Arabia

Saudi Petrochemical Plant Noise Control, Areg Gharabegian and Jim E. Peat, EE Dec. 86 p1026-1040.

Seasonal variations

Entrainment-Based Flux of Phosphorus in Onondaga Lake, Steven Effler, Martin C. Wodka, Charles T. Driscoll, Carol Brooks, Mary Gail Perkins and Emmet M. Owens, EE June 86 p617-622.

Sediment transport

Adsorption of Hydrophobic Pollutants in Estuaries, John P. Connolly, Neal E. Armstrong and Richard W. Miksad, EE Feb. 83 p17-35.

Sediments

Model for Sediment Oxygen Demand in Lakes, R. Walker Walker and William J. Snodgrass, EE Feb. 86 p25-43.

Seepage

Flow Characteristics of Landfill Leachate Collection Systems and Liners, George P. Korfiatis and Alexander C. Demetracopoulos, EE June 86 p538-550.

Sensitivity analysis

Modeling Leachate Production from Municipal Landfills, Alexander C. Demetracopoulos, Lilly Sehayek and Haydar Erdogan, EE Oct. 86 p849-866.

Settling velocity

Flocculant Settling Dynamics Under Constant Load, Blaine F. Severin and Richard A. Poduska, EE Feb. 86 p171-184.

Sewage

Olfactory Quantification of Sewage Odors, Lawrence C. C. Koe and Derek K. Brady, EE Apr. 86 p328-345.

Sewage sludge

Market Potential for Sludge Compost Product, Jerry Y. C. Huang, EE June 86 p454-467.

Sewage treatment

Exponential Smoothing of Monitoring Data, Paula A. Hitchman and P. M. Berthouex, EE June 86 p551-563.

Hydraulics of Rectangular Clarifiers, David W. Ostendorf, EE Oct. 86 p939-952.

Sewer design

Designing Sanitary Sewers with Microcomputers, Drew P. Desher and Patrick K. Davis, EE Dec. 86 p993-1007.

Shallow water

Macrophyte Growth in Shallow Streams: Field Investigations, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p953-966.

Shear effects

The Effects of Cross-Wind Shear on Horizontal Dispersion, Ashok Kumar, EE Feb. 86 p1-11.

Shredding

Evaluation of II Breakage Theory for Refuse Components, P. Aarne Vesilind, Eric I. Pas and Barbara Simpson, EE Dec. 86 p1109-1121.

Sludge digestion

Fundamentals of Anaerobic Digestion of Wastewater Sludge, Gene F. Parkin and William F. Owen, EE Oct. 86 p867-920.

Sludge disposal

Probabilistic Analysis of Sludge Land Application, Susan S. Kaufman and Douglas A. Haith, EE Dec. 86 p1041-1053.

Soils

Effect of Organic Solvent on Sorption of Aromatic Solutes onto Soils, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p346-366.

Soils, saturated

Gasoline Residual Saturation in Unsaturated Uni-

form Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Soils, unsaturated

Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Solid waste disposal

Evaluation of Π Breakage Theory for Refuse Components, P. Aarne Vesilind, Eric I. Pas and Barbara Simpson, EE Dec. 86 p1109-1121.

Market Potential for Sludge Compost Product, Jerry Y. C. Huang, EE June 86 p454-467

Solubility

Aromatic Compound Solubility in Solvent/Water Mixtures, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p328-345.

Solutes

Effect of Organic Solvent on Sorption of Aromatic Solutes onto Soils, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p346-366.

Solvents

Aromatic Compound Solubility in Solvent/Water Mixtures, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p328-345.

Effect of Organic Solvent on Sorption of Aromatic Solutes onto Soils, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p346-366.

Sorption

Effect of Organic Solvent on Sorption of Aromatic Solutes onto Soils, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p346-366.

Statistical analysis

Exponential Smoothing of Monitoring Data, Paula A. Hitchman and P. M. Berthouex, EE June 86 p551-563.

Geostatistical Analysis of Hazardous Waste Site Data, John H. Zirschky and Daniel J. Harris, EE Aug. 86 p770-784.

Water Quality Effects of Excavation and Diversion, F. Douglas Shields, Jr. and Thomas G. Sanders, EE Apr. 86 p2111-228.

Storage tanks

Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Stratified flow

Dispersion Response of Two-Layer Flows, George C. Christodoulou, EE Apr. 86 p433-438.

Stream pollution

DO Sag Model for Extremely Fast River Purification, Devendra Swaroop Bhargava, EE June 86 p572-585.

Effects of Parameter Uncertainty in Stream Modeling, John J. Warwick and William G. Cale, EE June 86 p479-489.

Streams

Macrophyte Growth in Shallow Streams: Field Investigations, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p953-966.

Macrophyte Growth in Shallow Streams: Biomass Model, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p967-982.

Stream Model of Benthic Nitrification-Denitrification, Randall E. Williams and Mark S. Lewis, EE Apr. 86 p367-386.

Wind Function for a Sheltered Stream, John S. Gulliver and Heinz G. Stefan, EE Apr. 86 p387-399.

Sulfates

Prediction of Sulfide Build-up in Filled Sanitary Sewers, G. A. Holder, EE Apr. 86 p199-210.

Sulfide buildup

Prediction of Sulfide Build-up in Filled Sanitary Sewers, G. A. Holder, EE Apr. 86 p199-210.

Suspended sediments

Adsorption of Hydrophobic Pollutants in Estuaries, John P. Connolly, Neal E. Armstrong and Richard W. Miksad, EE Feb. 83 p17-35.

Hydrosalinity Modeli[illegible] of Suspended Sediments, Hooshang Nezafa[illegible] David S. Bowles and L. Douglas James, EE Aug. 86 p663-676.

Salt Release Model for Suspended Sediments, Hooshang Nezafati, David S. Bowles and J. Paul Riley, EE Aug. 86 p647-662.

Suspended solids

Tertiary Filtration of Wastewaters, ASCE Task Committee on Design of Wastewater Filtration Facilities, EE Dec. 86 p1008-1025.

Tertiary Treatment with Ferrate and Ozone, Shaukat Farooq and Abdul Bari, EE Apr. 86 p301-310.

Tailings

Management of Inactive Uranium Mill Tailings, Task Committee on Low-Level Radioactive Waste Management of the Technical Committee on Nuclear Effects, EE June 86 p490-537.

Tertiary treatment

Tertiary Filtration of Wastewaters, ASCE Task Committee on Design of Wastewater Filtration Facilities, EE Dec. 86 p1008-1025.

Tertiary Treatment with Ferrate and Ozone, Shaukat Farooq and Abdul Bari, EE Apr. 86 p301-310.

Thermodynamics

Aromatic Compound Solubility in Solvent/Water Mixtures, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p328-345.

Thickening

Flocculant Settling Dynamics Under Constant Load, Blaine F. Severin and Richard A. Poduska, EE Feb. 86 p171-184.

Tidal waters

Slack Tide Oxygen Balance Model, Joseph H. W. Lee and K. W. Choi, EE Oct. 86 p985-991.

Tidel currents

Modeling of Pollutant Dispersion in Stratified Oscillatory Flows, Jae K. Park and A. James, EE Oct. 86 p921-938.

Time series analysis

Exponential Smoothing of Monitoring Data, Paula A. Hitchman and P. M. Berthouex, EE June 86 p551-563.

Tracer gas method

Flume Tests on Hydrocarbon Raeration Tracer Gases, Jerad D. Bales and Edward R. Holley, EE Aug. 86 p695-700.

Trickling filters

Distribution of Retention Times in Biological Filters I: Mathematical Model, Yilmaz Muslu, EE Dec. 86 p1122-1137.

Distribution of Retention Times in Biological Filters. II: Experimental Confirmation and Practical Application, Yilmaz Muslu, EE Dec. 86 p1138-1150.

Turbidity

Tertiary Treatment with Ferrate and Ozone, Shaukat Farooq and Abdul Bari, EE Apr. 86 p301-310.

Water Quality Effects of Excavation and Diversion, F. Douglas Shields, Jr. and Thomas G. Sanders, EE Apr. 86 p2111-228.

Turbulence

Destabilization of Particles by Turbulent Rapid Mixing, Appian Amirtharajah and Scott L. Trusler, EE Dec. 86 p1085-1108.

Two-dimensional flow

Hydraulics of Rectangular Clarifiers, David W. Ostendorf, EE Oct. 86 p939-952.

Uncertainty principles

Effects of Parameter Uncertainty in Stream Modeling, John J. Warwick and William G. Cale, EE June 86 p479-489.

Underground storage

Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, George E. Hoag and Michael C. Marley, EE June 86 p586-604.

Uranium

Management of Inactive Uranium Mill Tailings, Task Committee on Low-Level Radioactive Waste Management of the Technical Committee on Nuclear Effects, EE June 86 p490-537.

Velocity gradient

Characterization of Agitation Intensity in Flocculation Processes, Larry A. Glasgow and Y. H. Kim, EE Dec. 86 p1158-1163.

Volatile organic chemicals

Air Stripping of Volatile Organic Compounds Using Structured Media, Gary L. Amy and William J. Cooper, EE Aug. 86 p729-743.

Waste disposal

Risk Penalty Functions for Hazardous Waste Management, Aaron A. Jennings and P. Suresh, EE Feb. 86 p105-122.

Waste management

Risk Penalty Functions for Hazardous Waste Management, Aaron A. Jennings and P. Suresh, EE Feb. 86 p105-122.

Waste site cleanup

Geostatistical Analysis of Hazardous Waste Site Data, John H. Zirschky and Daniel J. Harris, EE Aug. 86 p770-784.

Waste treatment

Effects of Cd(II) and Cu(II) on a Biofilm System, Shoou-Yuh Chang, Ju-Chang Huang and Yow-Chyun Liu, EE Feb. 86 p94-104.

Wastewater treatment

Fundamentals of Anaerobic Digestion of Wastewater Sludge, Gene F. Parkin and William F. Owen, EE Oct. 86 p867-920.

Performance of Deep Biofilm Reactors, Makram T. Suidan, EE Feb. 86 p78-93.

River Quality Management under Stochastic Streamflow, O. Fujiwara, Selvanayagam K. Gnanendran and Shinichiro Ohgaki, EE Apr. 86 p185-198.

Tertiary Filtration of Wastewaters, ASCE Task Committee on Design of Wastewater Filtration Facilities, EE Dec. 86 p1008-1025.

Wastewater Treatment and Renovation by Different Duckweed Species, Gideon Oron, Dan Porath and Louw R. Wildschut, EE Apr. 86 p247-263.

Wastwater treatment

Chemical/Bio-Fluidized Bed Treatment & Slaughterhouse Wastwater, Chun T. Li, Wen K. Shieh, Chun S. Wu and Ju S. Huang, EE Aug. 86 p718-728.

Water

Aromatic Compound Solubility in Solvent/Water Mixtures, Jaw-Kwei Fu and Richard G. Luthy, EE Apr. 86 p328-345.

Water demand

Computer Procedure for Sizing Equalization Storage, S. L. Ong and G. S. Lee, EE June 86 p607-612.

Water distribution

Looped Water Distribution System Optimization for a Single Loading, Anand V. Chiplunkar, S. L. Mehndiratta and P. Khanna, EE Apr. 86 p264-279.

Water pollution

Dispersion Response of Two-Layer Flows, George C. Christodoulou, EE Apr. 86 p433-438.

Effects of Parameter Uncertainty in Stream Modeling, John J. Warwick and William G. Cale, EE June 86 p479-489.

Water quality

Alternative Methods for Estimation of Phosphorus Loadings, James D. Miertschin, EE Dec. 86 p1153-1158.

Assessing Phosphorus Control in the James River Basin, Wu-Seng Lung, EE Feb. 86 p44-60.

Macrophyte Growth in Shallow Streams: Biomass Model, Raymond M. Wright and Archie J. McDonnell, EE Oct. 86 p967-982.

Modeling of Phytoplankton in Saginaw Bay: II. Post-Audit Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p415-429.

Modeling of Pollutant Dispersion in Stratified Oscillatory Flows, Jae K. Park and A. James, EE Oct. 86 p921-938.

Phytoplankton in Saginaw Bay: I. Calibration Phase, Victor J. Bierman, Jr. and David M. Dolan, EE Apr. 86 p400-414.

River Quality Management under Stochastic Streamflow, O. Fujiwara, Selvanayagam K. Gnanendran and Shinichiro Ohgaki, EE Apr. 86 p185-198.

Slack Tide Oxygen Balance Model, Joseph H. W. Lee and K. W. Choi, EE Oct. 86 p985-991.

Stream Model of Benthic Nitrification-Denitrification, Randall E. Williams and Mark S. Lewis, EE Apr. 86 p367-386.

Water Quality Effects of Excavation and Diversion, F. Douglas Shields, Jr. and Thomas G. Sanders, EE Apr. 86 p2111-228.

Water quality standards

Expression for Drinking Water Supply Standards, Devendra Swaroop Bhargava, EE June 85 p304-316.

Water resources

Alternative Methods for Estimation of Phosphorus Loadings, James D. Miertschin, EE Dec. 86 p1153-1158.

Water storage

Computer Procedure for Sizing Equalization Storage, S. L. Ong and G. S. Lee, EE June 86 p607-612.

Water temperature

Model for Winter Heat Loss in Uncovered Clarifiers, Danny J. Wall and Glen Petersen, EE Feb. 86 p123-138.

Water treatment

Hydraulics of Rectangular Clarifiers, David W. Ostendorf, EE Oct. 86 p939-952.

Performance of Deep Biofilm Reactors, Makram T. Suidan, EE Feb. 86 p78-93.

Watersheds

Hydrosalinity Modeling of Suspended Sediments, Hooshang Nezafati, David S. Bowles and L. Douglas James, EE Aug. 86 p663-676.

Waterways

Water Quality Effects of Excavation and Diversion, F. Douglas Shields, Jr. and Thomas G. Sanders, EE Apr. 86 p2111-228.

Wind

Wind Function for a Sheltered Stream, John S. Gulliver and Heinz G. Stefan, EE Apr. 86 p387-399.

Author Index

Adams, Barry J.
Meteorological Data Analysis for Drainage System Design, with Hugh G. Fraser, Charles D. D. Howard and M. Sami Hanafy, EE Oct. 86, p827-848

Amirtharajah, Appian
Destabilization of Particles by Turbulent Rapid Mixing, with Scott L. Trusler, EE Dec. 86, p1085-1108

Amy, Gary L.
Air Stripping of Volatile Organic Compounds Using Structured Media, with William J. Cooper, EE Aug. 86, p729-743

Andrews, John F.
see Clifft, Ricky C., EE Feb. 86, p61-77

Armstrong, Neal E.
see Connolly, John P., EE Feb. 83, p17-35

ASCE Task Committee on Design of Wastewater Filtration Facilities, (Yeun C. Wu, chmn.)
Tertiary Filtration of Wastewaters, EE Dec. 86, p1008-1025

Bales, Jerad D.
Flume Tests on Hydrocarbon Raeration Tracer Gases, with Edward R. Holley, EE Aug. 86, p695-700

Bari, Abdul
see Farooq, Shaukat, EE Apr. 86, p301-310

Baxter, Terry E.
Calibration of a Cyclone for Monitoring Inhalable Particles, with Dennis D. Lane, Chatten Cowherd, Jr. and Frank Pendleton, EE June 86, p468-478

Beckman, Arthur H.
Mass Burning of MSW With Energy Recovery, with Mark G. Dragovich, EE June 86, p564-571

Berthouex, P. M.
see Hitchman, Paula A., EE June 86, p551-563

Bhargava, Devendra Swaroop
DO Sag Model for Extremely Fast River Purification, EE June 86, p572-585
Expression for Drinking Water Supply Standards, EE June 85, p304-316
disc: Kazuyoshi Kawata and Vincent P. Oliveri, EE Dec. 86, p1167-1168
clo: EE Dec. 86, p1168-1169

Bierman, Victor J., Jr.
Modeling of Phytoplankton in Saginaw Bay: II. Post-Audit Phase, with David M. Dolan, EE Apr. 86, p415-429
Phytoplankton in Saginaw Bay: I. Calibration Phase, with David M. Dolan, EE Apr. 86, p400-414

Bowles, David S.
see Nezafati, Hooshang, EE Aug. 86, p647-662
see Nezafati, Hooshang, EE Aug. 86, p663-676

Brady, Derek K.
see Koe, Lawrence C. C., EE Apr. 86, p328-345

Brooks, Carol
see Effler, Steven, EE June 86, p617-622

Cale, William G.
see Warwick, John J., EE June 86, p479-489

Chang, Shoou-Yuh
Effects of Cd(II) and Cu(II) on a Biofilm System, with Ju-Chang Huang and Yow-Chyun Liu, EE Feb. 86, p94-104

Chiplunkar, Anand V.
Looped Water Distribution System Optimization for a Single Loading, with S. L. Mehndiratta and P. Khanna, EE Apr. 86, p264-279

Choi, K. W.
see Lee, Joseph H. W., EE Oct. 86, p985-991

Christodoulou, George C.
Dispersion Response of Two-Layer Flows, EE Apr. 86, p433-438

Clark, Robert M.
Evaluating Field Scale GAC Systems for Drinking Water, with James M. Symons and John C. Ireland, EE Aug. 86, p744-756

Clifft, Ricky C.
Gas-Liquid Interactions in Oxygen Activated Sludge, with John F. Andrews, EE Feb. 86, p61-77

Connolly, John P.
Adsorption of Hydrophobic Pollutants in Estuaries, with Neal E. Armstrong and Richard W. Miksad, EE Feb. 83, p17-35
err: EE Aug. 86, p807

Cooper, Robert C.
see Olivieri, Adam W., EE Aug. 86, p757-769

Cooper, William J.
see Amy, Gary L., EE Aug. 86, p729-743

Cowherd, Chatten, Jr.
see Baxter, Terry E., EE June 86, p468-478

Dasgupta, Avijit
see Nemerow, Nelson L., EE Apr. 86, p229-235

Davis, Patrick K.
see Desher, Drew P., EE Dec. 86, p993-1007

Demetracopoulos, Alexander C.
Modeling Leachate Production from Municipal Landfills, with Lilly Sehayek and Haydar Erdogan, EE Oct. 86, p849-866
see Korfiatis, George P., EE June 86, p538-550

Desher, Drew P.
Designing Sanitary Sewers with Microcomputers, with Patrick K. Davis, EE Dec. 86, p993-1007

Dolan, David M.
see Bierman, Victor J., Jr., EE Apr. 86, p400-414
see Bierman, Victor J., Jr., EE Apr. 86, p415-429

Dragovich, Mark G.
see Beckman, Arthur H., EE June 86, p564-571

Driscoll, Charles T.
see Effler, Steven, EE June 86, p617-622

Effler, Steven
Entrainment-Based Flux of Phosphorus in Onondaga Lake, with Martin C. Wodka, Charles T. Driscoll, Carol Brooks, Mary Gail Perkins and Emmet M. Owens, EE June 86, p617-622

Eisenberg, Don M.
see Olivieri, Adam W., EE Aug. 86, p757-769

Erdogan, Haydar
see Demetracopoulos, Alexander C., EE Oct. 86, p849-866

Farooq, Shaukat
Tertiary Treatment with Ferrate and Ozone, with Abdul Bari, EE Apr. 86, p301-310

Finno, Richard J.
Clay Liner Compatibility in Waste Disposal Practice, with William R. Schubert, EE Dec. 86, p1070-1084

Forbes, Eugene J.
see Sung, Windsor, EE Dec. 84, p1048-1061

Fraser, Hugh G.
see Adams, Barry J., EE Oct. 86, p827-848

Fu, Jaw-Kwei
Aromatic Compound Solubility in Solvent/Water Mixtures, with Richard G. Luthy, EE Apr. 86, p328-345
Effect of Organic Solvent on Sorption of Aromatic Solutes onto Soils, with Richard G. Luthy, EE Apr. 86, p346-366

Fujiwara, O.
River Quality Management under Stochastic Streamflow, with Selvanayagam K. Gnanendran and Shinichiro Ohgaki, EE Apr. 86, p185-198

Garcia-Maura, Fernando
see Huang, Jerry Y. C., EE Aug. 86, p701-717

Gharabeglan, Areg
Saudi Petrochemical Plant Noise Control, with Jim E. Peat, EE Dec. 86, p1026-1040

Ghassemi, Masood
Leachate Collection Systems, EE June 86, p613-617

Glasgow, Larry A.
Characterization of Agitation Intensity in Flocculation Processes, with Y. H. Kim, EE Dec. 86, p1158-1163

Gloyna, Earnest F.
Environmental Engineering—Historical, Current and Future Perspectives, EE Oct. 86, p812-826

Gnanendran, Selvanayagam K.
see Fujiwara, O., EE Apr. 86, p185-198

Gulliver, John S.
Wind Function for a Sheltered Stream, with Heinz G. Stefan, EE Apr. 86, p387-399

Haith, Douglas A.
see Kaufman, Susan S., EE Dec. 86, p1041-1053

Hanafy, M. Sami
see Adams, Barry J., EE Oct. 86, p827-848

Hao, Oliver J.
Adsorption Characteristics of Fluoride onto Hydrous Alumina, with C. P. Huang, EE Dec. 86, p1054-1069

Harris, Daniel J.
see Zirschky, John H., EE Aug. 86, p770-784

Hitchman, Paula A.
Exponential Smoothing of Monitoring Data, with P. M. Berthouex, EE June 86, p551-563

Hoag, George E.
Gasoline Residual Saturation in Unsaturated Uniform Aquifer Materials, with Michael C. Marley, EE June 86, p586-604

Hoehn, Robert C.
see Sinsabaugh, Robert L., III, EE Feb. 86, p139-153

Holder, G. A.
Prediction of Sulfide Build-up in Filled Sanitary Sewers, EE Apr. 86, p199-210

Holley, Edward R.
see Bales, Jerad D., EE Aug. 86, p695-700

Howard, Charles D. D.
see Adams, Barry J., EE Oct. 86, p827-848

Huang, C. P.
see Hao, Oliver J., EE Dec. 86, p1054-1069

Huang, Jerry Y. C.
Effect of Influent Property on Filter Performance, with Fernando Garcia-Maura, EE Aug. 86, p701-717
Market Potential for Sludge Compost Product, EE June 86, p454-467

Huang, Ju S.
see Li, Chun T., EE Aug. 86, p718-728

Huang, Ju-Chang
see Chang, Shoou-Yuh, EE Feb. 86, p94-104

Ireland, John C.
see Clark, Robert M., EE Aug. 86, p744-756

James, A.
see Park, Jae K., EE Oct. 86, p921-938

James, L. Douglas
see Nezafati, Hooshang, EE Aug. 86, p663-676

Jennings, Aaron A.
Risk Penalty Functions for Hazardous Waste Management, with P. Suresh, EE Feb. 86, p105-122

Kaufman, Susan S.
Probabilistic Analysis of Sludge Land Application, with Douglas A. Haith, EE Dec. 86, p1041-1053

Kawata, Kazuyoshi
disc. (of Expression for Drinking Water Supply Standards, by Devendra Swaroop Bhargava, EE June 85, p304-316) with Vincent P. Oliveri, EE Dec. 86, p1167-1168

Khanna, P.
see Chiplunkar, Anand V., EE Apr. 86, p264-279

Kim, Y. H.
see Glasgow, Larry A., EE Dec. 86, p1158-1163

Knocke, William R.
see Sinsabaugh, Robert L., III, EE Feb. 86, p139-153

Koe, Lawrence C. C.
Olfactory Quantification of Sewage Odors, with Derek K. Brady, EE Apr. 86, p328-345

Korflatis, George P.
Flow Characteristics of Landfill Leachate Collection Systems and Liners, with Alexander C. Demetracopoulos, EE June 86, p538-550

Kumar, Ashok
The Effects of Cross-Wind Shear on Horizontal Dispersion, EE Feb. 86, p1-11

Lane, Dennis D.
see Baxter, Terry E., EE June 86, p468-478

Lee, G. S.
see Ong, S. L., EE June 86, p607-612

Lee, Joseph H. W.
Slack Tide Oxygen Balance Model, with K. W. Choi, EE Oct. 86, p985-991

Lewis, Mark S.
see Williams, Randall E., EE Apr. 86, p367-386

Li, Chun T.
Chemical/Bio-Fluidized Bed Treatment & Slaughterhouse Wastwater, with Wen K. Shieh, Chun S. Wu and Ju S. Huang, EE Aug. 86, p718-728

Lin, James C.
Acid Precipitation Model for Seepage Lakes, with Jerald L. Schnoor, EE Aug. 86, p677-694

Linkins, Arthur E.
see Sinsabaugh, Robert L., III, EE Feb. 86, p139-153

Liu, Yow-Chyun
see Chang, Shoou-Yuh, EE Feb. 86, p94-104

Lung, Wu-Seng
Assessing Phosphorus Control in the James River Basin, EE Feb. 86, p44-60

Luthy, Richard G.
see Fu, Jaw-Kwei, EE Apr. 86, p328-345
see Fu, Jaw-Kwei, EE Apr. 86, p346-366

McDonnell, Archie J.
see Wright, Raymond M., EE Oct. 86, p953-966
see Wright, Raymond M., EE Oct. 86, p967-982

Mahmood, Ramzi J.
Mobility of Organics in Land Treatment Systems, with Ronald C. Sims, EE Apr. 86, p236-245

Manko, Zbigniew
Evaluation of the Noise Level of Steel Railway Bridges, EE June 86, p439-453

Marley, Michael C.
see Hoag, George E., EE June 86, p586-604

Mehndiratta, S. L.
see Chiplunkar, Anand V., EE Apr. 86, p264-279

Miertschin, James D.
Alternative Methods for Estimation of Phosphorus Loadings, EE Dec. 86, p1153-1158

Miksad, Richard W.
see Connolly, John P., EE Feb. 83, p17-35

Murray, Louis
see Peirce, J. Jeffrey, EE Apr. 86, p280-291

Musa, Yilmaz
Distribution of Retention Times in Biological Filters I: Mathematical Model, EE Dec. 86, p1122-1137
Distribution of Retention Times in Biological Filters. II: Experimental Confirmation and Practical Application, EE Dec. 86, p1138-1150

Nemerow, Nelson L.
Environmentally Balanced Sugar Refinery Complex, with Avijit Dasgupta, EE Apr. 86, p229-235

Nezafati, Hooshang
Hydrosalinity Modeling of Suspended Sediments, with David S. Bowles and L. Douglas James, EE Aug. 86, p663-676
Salt Release Model for Suspended Sediments, with David S. Bowles and J. Paul Riley, EE Aug. 86, p647-662

Ohgaki, Shinichiro
see Fujiwara, O., EE Apr. 86, p185-198

Oliveri, Vincent P.
see Kawata, Kazuyoshi, (disc), EE Dec. 86, p1167-1168

Olivieri, Adam W.
Groundwater Contamination Site Ranking Methodology, with Don M. Eisenberg and Robert C. Cooper, EE Aug. 86, p757-769

Ong, S. L.
Computer Procedure for Sizing Equalization Storage, with G. S. Lee, EE June 86, p607-612

Oron, Gideon
Wastewater Treatment and Renovation by Different Duckweed Species, with Dan Porath and Louw R. Wildschut, EE Apr. 86, p247-263

Ostendorf, David W.
Hydraulics of Rectangular Clarifiers, EE Oct. 86, p939-952

Owen, William F.
see Parkin, Gene F., EE Oct. 86, p867-920

Owens, Emmet M.
see Effler, Steven, EE June 86, p617-622

Park, Jae K.
Modeling of Pollutant Dispersion in Stratified Oscillatory Flows, with A. James, EE Oct. 86, p921-938

Parkin, Gene F.
Fundamentals of Anaerobic Digestion of Wastewater Sludge, with William F. Owen, EE Oct. 86, p867-920

Pas, Eric I.
see Vesilind, P. Aarne, EE Dec. 86, p1109-1121

Pest, Jim E.
see Gharabegian, Areg, EE Dec. 86, p1026-1040

Peirce, J. Jeffrey
Clay Liner Construction and Quality Control, with Goran Sallfors and Eric Peterson, EE Feb. 86, p13-24
Overburden Pressures Exerted on Clay Liners, with Goran Sallfors and Louis Murray, EE Apr. 86, p280-291

Pendleton, Frank
see Baxter, Terry E., EE June 86, p468-478

Perkins, Mary Gail
see Effler, Steven, EE June 86, p617-622

Petersen, Glen
see Wall, Danny J., EE Feb. 86, p123-138

Peterson, Eric
see Peirce, J. Jeffrey, EE Feb. 86, p13-24

Poduska, Richard A.
see Severin, Blaine F., EE Feb. 86, p171-184

Porath, Dan
see Oron, Gideon, EE Apr. 86, p247-263

Ramamurthy, Amruthur S.
Rectangular Lateral Orifices in Open Channels, with Udoyara S. Tim and Semaan Sarraf, EE Apr. 86, p292-300

Riley, J. Paul
see Nezafati, Hooshang, EE Aug. 86, p647-662

Rittmann, Bruce E.
see Wang, Yi-Tin, EE Feb. 86, p155-170

Robinson, Lloyd R., Jr.
disc. (of Some Considerations on Iron Removal, by Windsor Sung and Eugene J. Forbes, EE Dec. 84, p1048-1061), EE Aug. 86, p807-809

Sallfors, Goran
see Peirce, J. Jeffrey, EE Feb. 86, p13-24
see Peirce, J. Jeffrey, EE Apr. 86, p280-291

Sanders, Thomas G.
see Shields, F. Douglas, Jr., EE Apr. 86, p2111-228

Sarraf, Semaan
see Ramamurthy, Amruthur S., EE Apr. 86, p292-300

Schnoor, Jerald L.
see Lin, James C., EE Aug. 86, p677-694

Schubert, William R.
see Finno, Richard J., EE Dec. 86, p1070-1084

Sehayek, Lilly
see Demetracopoulos, Alexander C., EE Oct. 86, p849-866

Severin, Blaine F.
Flocculant Settling Dynamics Under Constant Load, with Richard A. Poduska, EE Feb. 86, p171-184

Shieh, Wen K.
see Li, Chun T., EE Aug. 86, p718-728

Shields, F. Douglas, Jr.
Water Quality Effects of Excavation and Diversion, with Thomas G. Sanders, EE Apr. 86, p2111-228

Simpson, Barbara
see Vesilind, P. Aarne, EE Dec. 86, p1109-1121

Sims, Ronald C.
see Mahmood, Ramzi J., EE Apr. 86, p236-245

Sinsabaugh, Robert L., III
Precursor Size and Organic Halide Formation Rates in Raw and Coagulated Surface Waters, with Robert C. Hoehn, William R. Knocke and Arthur E. Linkins, EE Feb. 86, p139-153

Snodgrass, William J.
see Walker, R. Walker, EE Feb. 86, p25-43

Stefan, Heinz G.
see Gulliver, John S., EE Apr. 86, p387-399

Strand, Stuart E.
Model of Ammonia and Carbon Oxidation in Biofilms, EE Aug. 86, p785-804

Suidan, Makram T.
Performance of Deep Biofilm Reactors, EE Feb. 86, p78-93
see Wang, Yi-Tin, EE Feb. 86, p155-170

Sung, Windsor
Some Considerations on Iron Removal, with Eugene J. Forbes, EE Dec. 84, p1048-1061
disc: Lloyd R. Robinson, Jr., EE Aug. 86, p807-809
clo: EE Aug. 86, p809

Suresh, P.
see Jennings, Aaron A., EE Feb. 86, p105-122

Symons, James M.
see Clark, Robert M., EE Aug. 86, p744-756

Task Committee on Environmental Assessment of the Air, Noise and Radiation Management Committee of the Environmental Engineering Division, (Robert Dresnack, chmn.)
The Public Role in Environmental Assessments, EE Aug. 86, p623-637

Task Committee on Environmental Auditing of the Professional Coordination Committee of the Environmental Engineering Division, (Donald R. Perande, chmn.)
Environmental Auditing—Overview, EE Aug. 86, p638-646

Task Committee on Low-Level Radioactive Waste Management of the Technical Committee on Nuclear Effects, (William C. Mason, chmn.)
Management of Inactive Uranium Mill Tailings, EE June 86, p490-537

Tim, Udoyara S.
see Ramamurthy, Amruthur S., EE Apr. 86, p292-300

Trusler, Scott L.
see Amirtharajah, Appian, EE Dec. 86, p1085-1108

Vesilind, P. Aarne
Evaluation of II Breakage Theory for Refuse Components, with Eric I. Pas and Barbara Simpson, EE Dec. 86, p1109-1121

Walker, R. Walker
Model for Sediment Oxygen Demand in Lakes, with William J. Snodgrass, EE Feb. 86, p25-43

Wall, Danny J.
Model for Winter Heat Loss in Uncovered Clarifiers, with Glen Petersen, EE Feb. 86, p123-138

Wang, Yi-Tin
Kinetics of Methanogens in an Expanded-Bed Reactor, with Makram T. Suidan and Bruce E. Rittmann, EE Feb. 86, p155-170

Warwick, John J.
Effects of Parameter Uncertainty in Stream Modeling, with William G. Cale, EE June 86, p479-489
err: EE Dec. 86, p1170

Wildschut, Louw R.
see Oron, Gideon, EE Apr. 86, p247-263

Williams, Randall E.
Stream Model of Benthic Nitrification-Denitrification, with Mark S. Lewis, EE Apr. 86, p367-386

Wodka, Martin C.
see Effler, Steven, EE June 86, p617-622

Wright, Raymond M.
Macrophyte Growth in Shallow Streams: Field Investigations, with Archie J. McDonnell, EE Oct. 86, p953-966
Macrophyte Growth in Shallow Streams: Biomass Model, with Archie J. McDonnell, EE Oct. 86, p967-982

Wu, Chun S.
see Li, Chun T., EE Aug. 86, p718-728

Zirschky, John H.
Geostatistical Analysis of Hazardous Waste Site Data, with Daniel J. Harris, EE Aug. 86, p770-784